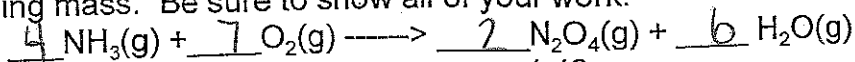


1. Using the following unbalanced equation and information below it, find the missing mass. Be sure to show all of your work.



m = ?

m = 1.43 g

M = 32.00 g/mol

M = 92.02 g/mol

5/5 $n = \frac{1.43\text{g}}{32.00\text{g/mol}}$

$n = 0.0447\text{mol}$
N₂O₄

$0.0447 \times \frac{7}{2} = 0.156\text{mol}$
O₂

$0.056 = \frac{m}{32.00\text{g/mol}}$

$m = 1.79\text{g O}_2$

2. How many grams of magnesium phosphate will be produced when 18.56 grams of magnesium hydroxide reacts with phosphoric acid?



m = 18.56g

m = ?

M = 58.33g/mol

M = 262.87g/mol

$n = \frac{18.56\text{g}}{58.33\text{g/mol}}$

$n = 0.32\text{mol}$
Mg(OH)₂

$0.32 \times \frac{1}{3} = 0.107\text{mol}$
Mg₃(PO₄)₂

$0.107\text{mol} = \frac{m}{262.87\text{g/mol}}$

$m = 28.04\text{g}$
Mg₃(PO₄)₂